

05-02-05

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Patent Application  
Attorney Docket No. PC11724E  
EXPRESS MAIL EV654805507US

I hereby certify that this correspondence is being deposited with the United States Postal Service as Express mail "Post Office to Addressee" in an envelope addressed to: Hon. Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313, Attn: Technology Center Special Program Examiner on this 29th day of April, 2005.

By

Deanna L Shields

(Signature of person mailing)

Deanna L. Shields

(Typed or printed name of person)

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

IN RE APPLICATION OF: **Zheng J. Li, et al.** :  
APPLICATION NO.: 10/652,655 : Examiner: Berko, Retford O  
FILING DATE: August 28, 2003 : Group Art Unit: 1615  
TITLE: CRYSTAL FORMS OF AZITHROMYCIN :

Hon. Commissioner for Patents  
P. O. Box 1450  
Alexandria, VA 22313-1450  
ATTN: Technology Center Special Program Examiner

Sir:

PETITION TO MAKE SPECIAL UNDER 37 C.F.R. § 1.102

Applicants hereby request that the present application be made special for accelerated examination under 37 C.F.R. § 1.102 and M.P.E.P. § 708.02 (VIII).

REQUIREMENT OF M.P.E.P. § 708.02 (VIII)(A) - FEE

The commissioner is authorized to charge the fee set forth in 37 C.F.R. 1.17(h) in the amount of \$130.00 to our Deposit Account No. 16-1445 for consideration of the present petition. Therefore, Applicants have satisfied the requirement of M.P.E.P. § 708.02 (VIII)(A).

REQUIREMENT OF M.P.E.P. § 708.02 (VIII)(B) - SINGLE INVENTION

Applicants have filed an Amendment on April 6, 2005 in response to March 11, 2005 Office Action requiring restriction of claims to one of the following inventions under

05/04/2005 AWONDAF1 00000040 161445 10652655

01 FC:1464 130.00 DA

35 U.S.C. 121:

- I. Claims 1-95; drawn to a composition comprising forms of azithromycin
- II. Claims 96-123 drawn to a method of preparing azithromycin formulations.

Applicants have canceled all original claims without prejudice and added new claims 136-143 to emphasize that the claimed crystalline form of azithromycin is substantially pure Form F. Applicants respectfully submit that new claims 124-143 belong to group I claims and no group II claims have been introduced. Therefore, new claims 124-143 are directed to a single invention (a copy of new claims 124-143, together with a copy of the PCT claims are enclosed herein). However, if the Patent Office determines that all the claims presented are not obviously directed to a single invention, Applicants will make another election without traverse. Applicants respectfully submit that the requirements of M.P.E.P. § 708.02 (VIII)(B) have been met.

REQUIREMENT OF M.P.E.P. § 708.02 (VIII)(C) – PRE-EXAMINATION SEARCH

M.P.E.P. § 708.02 (VIII)(C) requires the submission of a statement on pre-examination search. Applicants note that such requirement can be met by a search made by a foreign patent office if the claims in the corresponding foreign application are of the same or similar scope to the claims in the U.S. application for which special status is requested.

Applicants would like to point out that a search was made by the International Searching Authority/European Patent Office and the claims in the PCT application are of similar scope to the claims in the present U.S. application. For your convenience, a copy of the pending PCT claims is enclosed as well as copies of the PCT search report and the written opinion. Therefore, Applicants have satisfied the requirement of M.P.E.P. § 708.02 (VIII)(C).

REQUIREMENT OF M.P.E.P. § 708.02 (VIII)(D) – COPIES OF THE REFERENCES

The PCT search report cited the following nine references:

- Ref. 1 EP 0298650A (Pfizer), January 11, 1989;
- Ref. 2 EP 1103558A (Astur Pharma S A), May 30, 2001;

- Ref. 3 WO 0100640A (Ludescher Jonannes), January 4, 2001;  
Ref. 4 CA 2245398A (Motamedi M), February 21, 2000;  
Ref. 5 WO 00 32203A Singer Claude), June 8, 2000;  
Ref. 6 CN 1093370A (Jicai Medicine Research Inst B), October 12, 1994;  
Ref. 7 Chemical Abstract No. 29525, Vol. 124, No. 3, January 15, 1996;  
Ref. 8 WO 9804574A (Abbott Lab), February 5, 1998; and  
Ref. 9 WO 0014099A (Kim Wan Joo), March 16, 2000.

All of the nine references, including their English translation where the references were published in foreign languages, were cited/submitted to the U.S. Patent Office in the Information Disclosure Statement mailed on October 15, 2003. Therefore, the requirement of M.P.E.P. § 708.02 (VIII)(D) was satisfied, as all these references were already cited/submitted to the United States Patent and Trademark Office.

**REQUIREMENT OF M.P.E.P. § 708.02 (VIII)(D) – DETAILED DISCUSSIONS**

The references cited in the PCT search report were discussed in the enclosed PCT written opinion. Applicants note that most of the references disclose azithromycin Forms other than Form F. In the present application, Applicants have amended the U.S. claims to emphasize that the claimed crystalline form of azithromycin is substantially pure Form F. Therefore, Applicants have satisfied the requirement of M.P.E.P. § 708.02 (VIII)(D).

CONCLUSION

Applicants respectfully submit that the present petition has satisfied all the requirements of M.P.E.P. § 708.02 (VIII)(A), (B), (C), (D) and (E). Accordingly favorable consideration of the present petition is respectfully requested.

It is believed that no fee, other than the \$130 fee set forth in 37 C.F.R. 1.17(h) is deemed necessary in connection with the filing of the present petition. However, if any other fees are required, the Commissioner is hereby authorized to charge any such fees to our Deposit Account No. 16-1445.

Respectfully submitted,

Date: 04/29/05

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## INTERNATIONAL SEARCH REPORT

International Application No

PCT/IB 02/01570

## A. CLASSIFICATION OF SUBJECT MATTER

IPC 7 C07H17/08

According to International Patent Classification (IPC) or to both national classification and IPC

## B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC 7 C07H

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

| Category * | Citation of document, with indication, where appropriate, of the relevant passages  | Relevant to claim No. |
|------------|---|-----------------------|
| A          | EP 0 298 650 A (PFIZER)<br>11 January 1989 (1989-01-11)<br>cited in the application<br>page 4 method B  | 1,2,15                |
| P,A        | EP 1 103 558 A (ASTUR PHARMA S A)<br>30 May 2001 (2001-05-30)<br>page 4; table  | 1,2,15                |
| A          | WO 01 00640 A (LUDESCHER JOHANNES ; GARCIA<br>RAFAEL (ES); BIOCHEMIE SA (ES); DIAGO J)<br>4 January 2001 (2001-01-04)<br>page 10, line 26 - line 28 | 1,4,5,<br>8-13        |
| X          | CA 2 245 398 A (MOTAMEDI M., KARIMIAN K.,<br>APOTEX INC. )<br>21 February 2000 (2000-02-21)<br>whole document                                       | 1,4,5,<br>8-13        |

-/-



Further documents are listed in the continuation of box C.



Patent family members are listed in annex.

## \* Special categories of cited documents :

- "A" document defining the general state of the art which is not considered to be of particular relevance
- "E" earlier document but published on or after the international filing date
- "L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
- "O" document referring to an oral disclosure, use, exhibition or other means
- "P" document published prior to the international filing date but later than the priority date claimed

- "T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
- "X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
- "Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.
- "&" document member of the same patent family

Date of the actual completion of the international search

1 October 2002

Date of mailing of the international search report

1. 1. 10. 02

Name and mailing address of the ISA

European Patent Office, P.B. 5818 Patentlaan 2  
NL - 2280 HV Rijswijk  
Tel. (+31-70) 340-2040, Tx. 31 651 epo nl,  
Fax: (+31-70) 340-3016

Authorized officer

Klein, D

## INTERNATIONAL SEARCH REPORT

International Application No

PCT/IB 02/01570

## C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

| Category * | Citation of document, with indication, where appropriate, of the relevant passages   | Relevant to claim No. |
|------------|--|-----------------------|
| X          | WO 00 32203 A (SINGER CLAUDE ;TEVA PHARMA (IL); ARONHEIM JUDITH (IL); TEVA PHARMA)<br>8 June 2000 (2000-06-08)<br>cited in the application<br>whole document | 1,4,5,<br>8-13        |
| A          | CN 1 093 370 A (JICAI MEDICINE RESEARCH<br>INST B) 12 October 1994 (1994-10-12)  |                       |
| X          | & CHEMICAL ABSTRACTS, vol. 124, no. 3,<br>15 January 1996 (1996-01-15)<br>Columbus, Ohio, US;<br>abstract no. 29525,<br>abstract                             | 1-15                  |
| X          | WO 98 04574 A (ABBOTT LAB)<br>5 February 1998 (1998-02-05)<br>examples   | 1-15                  |
| A          | WO 00 14099 A (KIM WAN JOO ;LEE KYOUNG IK (KR); LEE TAE SUK (KR); LEE GWAN SUN (K)<br>16 March 2000 (2000-03-16)<br>the whole document                       |                       |

# INTERNATIONAL SEARCH REPORT

International application No.  
PCT/IB 02/01570

## Box I Observations where certain claims were found unsearchable (Continuation of item 1 of first sheet)

This International Search Report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. ☐ Claims Nos.:  
because they relate to subject matter not required to be searched by this Authority, namely:
2. ☐ Claims Nos.:  
because they relate to parts of the International Application that do not comply with the prescribed requirements to such an extent that no meaningful International Search can be carried out, specifically:
3. ☐ Claims Nos.:  
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

## Box II Observations where unity of invention is lacking (Continuation of item 2 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:

see additional sheet

1. ☒ As all required additional search fees were timely paid by the applicant, this International Search Report covers all searchable claims.
2. ☐ As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.
3. ☐ As only some of the required additional search fees were timely paid by the applicant, this International Search Report covers only those claims for which fees were paid, specifically claims Nos.:
4. ☐ No required additional search fees were timely paid by the applicant. Consequently, this International Search Report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

Remark on Protest

- ☐ The additional search fees were accompanied by the applicant's protest.
- ☒ No protest accompanied the payment of additional search fees.

FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

This International Searching Authority found multiple (groups of) inventions in this international application, as follows:

1. Claims: 1(part), 2, 15

Crystals of azithromycin obtained in non polar solvents :  
monohydrate monocyclohexane solvate of azithromycin (form D).  
monomonomethyl tertibutyl ether solvate of azithromycin  
(form R).

2. Claims: 1(part), 3, 14

Crystals of azithromycin obtained in the presence of THF :  
monohydrate monotetrahydrofuran solvate of azithromycin  
(form E).  
monohydrate hemitetrahydrofuran solvate of azithromycin  
(form Q).

3. Claims: 1(part), 4, 5, 8-13

Crystals of azithromycin consisting in alcohol solvates:  
Forms F, H, J, M, N, O, P.

4. Claims: 6, 7

Crystals of azithromycin obtained in the sesquihydrate form:  
(form G).



## INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No

PCT/IB 02/01570

| Patent document<br>cited in search report |   | Publication<br>date | Patent family<br>member(s) | Publication<br>date |
|---|---|---------------------|----------------------------|---------------------|
| EP 0298650                                | A | 11-01-1989          | WO 8900576 A1              | 26-01-1989          |
|   |   |                     | AP 44 A                    | 27-07-1989          |
|   |   |                     | AT 72446 T                 | 15-02-1992          |
|   |   |                     | AU 604553 B2               | 20-12-1990          |
|   |   |                     | AU 1883988 A               | 12-01-1989          |
|   |   |                     | BA 98213 B1                | 02-08-1999          |
|   |   |                     | BG 47348 A3                | 15-06-1990          |
|   |   |                     | CA 1314876 A1              | 23-03-1993          |
|   |   |                     | CN 1030422 A ,B            | 18-01-1989          |
|   |   |                     | CS 8804896 A2              | 14-03-1990          |
|   |   |                     | CY 1776 A                  | 20-10-1995          |
|   |   |                     | DD 271705 A5               | 13-09-1989          |
|   |   |                     | DE 3868296 D1              | 19-03-1992          |
|   |   |                     | DK 380688 A                | 10-01-1989          |
|   |   |                     | EP 0298650 A2              | 11-01-1989          |
|   |   |                     | ES 2038756 T3              | 01-08-1993          |
|   |   |                     | FI 900087 A ,B,            | 08-01-1990          |
|   |   |                     | GR 3003737 T3              | 16-03-1993          |
|   |   |                     | HK 127594 A                | 25-11-1994          |
|   |   |                     | HU 9500738 A3              | 28-11-1995          |
|   |   |                     | IE 60354 B                 | 29-06-1994          |
|   |   |                     | IL 86979 A                 | 15-11-1992          |
|   |   |                     | IN 168879 A1               | 29-06-1991          |
|   |   |                     | JP 1038096 A               | 08-02-1989          |
|   |   |                     | JP 1903527 C               | 08-02-1995          |
|   |   |                     | JP 6031300 B               | 27-04-1994          |
|   |   |                     | KR 9006218 B1              | 25-08-1990          |
|   |   |                     | LV 10624 A                 | 20-04-1995          |
|   |   |                     | MX 12213 A                 | 01-05-1993          |
|   |   |                     | NZ 225338 A                | 26-02-1990          |
|   |   |                     | OA 8743 A                  | 31-03-1989          |
|   |   |                     | PT 87933 A ,B              | 30-06-1989          |
|   |   |                     | RO 107257 B1               | 30-10-1993          |
|   |   |                     | SG 27794 G                 | 14-10-1994          |
|   |   |                     | SI 8811325 A8              | 31-12-1996          |
|   |   |                     | RU 2066324 C1              | 10-09-1996          |
|   |   |                     | US 6268489 B1              | 31-07-2001          |
|   |   |                     | YU 132588 A1               | 28-02-1990          |
|   |   |                     | ZA 8804925 A               | 28-02-1990          |
| EP 1103558                                | A | 30-05-2001          | EP 1103558 A2              | 30-05-2001          |
|   |   |                     | EP 1234833 A2              | 28-08-2002          |
|   |   |                     | JP 2001187797 A            | 10-07-2001          |
|   |   |                     | PL 344101 A1               | 04-06-2001          |
|   |   |                     | TR 200003474 A2            | 23-07-2001          |
|   |   |                     | US 6451990 B1              | 17-09-2002          |
| WO 0100640                                | A | 04-01-2001          | AU 5820400 A               | 31-01-2001          |
|   |   |                     | WO 0100640 A1              | 04-01-2001          |
|   |   |                     | EP 1189915 A1              | 27-03-2002          |
| CA 2245398                                | A |                     | NONE                       |                     |
| WO 0032203                                | A | 08-06-2000          | AU 3106500 A               | 19-06-2000          |
|   |   |                     | BG 105547 A                | 31-12-2001          |
|   |   |                     | CN 1334735 T               | 06-02-2002          |
|   |   |                     | CZ 20011886 A3             | 17-10-2001          |
|   |   |                     | EP 1152765 A1              | 14-11-2001          |

# INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No

PCT/IB 02/01570

| Patent document<br>cited in search report |   | Publication<br>date | Patent family<br>member(s) | Publication<br>date |
|---|---|---------------------|----------------------------|---------------------|
| WO 0032203                                | A |                     | LV 12735 A                 | 20-10-2001          |
|   |   |                     | LV 12735 B                 | 20-03-2002          |
|   |   |                     | PL 347971 A1               | 06-05-2002          |
|   |   |                     | SI 20639 A                 | 28-02-2002          |
|   |   |                     | WO 0032203 A1              | 08-06-2000          |
|   |   |                     | US 2002007049 A1           | 17-01-2002          |
| CN 1093370                                | A | 12-10-1994          | CN 1114960 A ,B            | 17-01-1996          |
| WO 9804574                                | A | 05-02-1998          | US 5844105 A               | 01-12-1998          |
|   |   |                     | AU 733646 B2               | 17-05-2001          |
|   |   |                     | AU 3740597 A               | 20-02-1998          |
|   |   |                     | EP 0915899 A1              | 19-05-1999          |
|   |   |                     | JP 2002514171 T            | 14-05-2002          |
|   |   |                     | WO 9804574 A1              | 05-02-1998          |
| WO 0014099                                | A | 16-03-2000          | EP 1112280 A1              | 04-07-2001          |
|   |   |                     | JP 2002524465 T            | 06-08-2002          |
|   |   |                     | WO 0014099 A1              | 16-03-2000          |

# PATENT COOPERATION TREATY

From the  
INTERNATIONAL PRELIMINARY EXAMINING AUTHORITY

# PCT

To:

LUMB, Trevor J.  
PFIZER Inc  
201 Tabor Road, Morris Plains,  
New Jersey 07950  
ETATS-UNIS D'AMERIQUE

WRITTEN OPINION

(PCT Rule 66)

*ba*

Date of mailing  
(day/month/year)

04/03/2003

Applicant's or agent's file reference

PC11724ABCZ

REPLY DUE

within 1 / 00 months/days  
from the above date of mailing

International application No.

PCT/ IB 02/ 01570

International filing date (day/month/year)

01/05/2002

Priority date (day/month/year)

22/05/2001

International Patent Classification (IPC) or both national classification and IPC

C07H17/08

Applicant

PFIZER PRODUCTS INC.et al.

1. This written opinion is the first drawn up by this International Preliminary Examining Authority.

2. This opinion contains indications relating to the following items:

- I ☒ Basis of the opinion
- II ☐ Priority
- III ☒ Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- IV ☒ Lack of unity of invention
- V ☒ Reasoned statement under Rule 66.2(a)(ii) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- VI ☐ Certain documents cited
- VII ☐ Certain defects in the international application
- VIII ☐ Certain observations on the international application

3. The applicant is hereby invited to reply to this opinion.

**When?** See the time limit indicated above. The applicant may, before the expiration of that time limit, request this Authority to grant an extension, see Rule 66.2(d).  
**How?** By submitting a written reply, accompanied, where appropriate, by amendments, according to Rule 66.3. For the form and the language of the amendments, see Rules 66.8 and 66.9.

**Also** For an additional opportunity to submit amendments, see Rule 66.4.  
For the examiner's obligation to consider amendments and/or arguments, see Rule 66.4bis.  
For an informal communication with the examiner, see Rule 66.6.

If no reply is filed, the international preliminary examination report will be established on the basis of this opinion.

4. The final date by which the international preliminary examination report must be established according to Rule 69.2 is: 22/09/2003

Name and mailing address of the IPEA/



European Patent Office  
D-80298 Munich  
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Authorized officer

Examiner

Formalities officer  
(incl. extension of time limits)  
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**I. Basis of the opinion**

The basis of this written opinion is the application as originally filed.

**III. Non-establishment of opinion with regard to novelty, inventive step and industrial applicability**

If all the additional search fees, which the applicant has been invited to pay, have not been paid, then all the inventions or groups of inventions corresponding to the unpaid fees will not have been searched. This means that the question of whether the claimed invention appears to be novel, to involve an inventive step, or to be industrially applicable has not been and will not be the subject of the international preliminary examination in respect of the claims corresponding to these inventions or groups of inventions (Article 17(3)(a) and Rule 66.1(e) PCT; see also international search report).

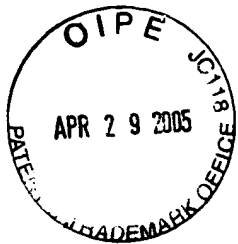
**IV. Lack of unity of invention**

The objection as to lack of unity raised in the international search report is maintained. The reasons for the objection are the same as those indicated in the international search report.

**V. Reasoned statement under Rule 66.2(a)(ii) with regard to novelty, inventive step or industrial applicability**

1. To the extent that the international preliminary examination has been carried out (see item III above), the following is pointed out:
2. In light of the documents cited in the international search report, it is considered that the invention as defined in at least some of the claims, which have been the subject of an international search report, does not appear to meet the criteria mentioned in Article 33(1) PCT, i.e. does not appear to be novel and/or to involve an inventive step (see international search report, in particular the documents cited X and/or Y and corresponding claim references).
3. If amendments are filed, the applicant should comply with the requirements of Rule 66.8 PCT and indicate the basis of the amendments in the documents of the application as originally filed (Article 34 (2) (b) PCT) otherwise these amendments may not be taken into consideration for the establishment of the international preliminary examination report. The attention of the applicant is drawn to the fact that if the application contains an unnecessary plurality of independent claims, no examination of any of the claims will be carried out.

**NB:** Should the applicant decide to request detailed substantive examination, then an international preliminary examination report will normally be established directly. Exceptionally the examiner may draw up a second written opinion, should this be explicitly requested.



## AMENDMENTS TO THE CLAIMS

1 - 123. (Canceled)

124. (New) A crystalline form of azithromycin, wherein said form is substantially pure Form F.

125. (New) The crystalline form of claim 124, wherein said form is characterized as having a  $^{13}\text{C}$  solid state NMR spectrum comprising one peak with chemical shift of about 179.5 ppm,

126. (New) The crystalline form of claim 125, wherein said  $^{13}\text{C}$  solid state NMR spectrum further comprises a peak with chemical shift of about 178.6 ppm.

127. (New) The crystalline form of claim 126, wherein said  $^{13}\text{C}$  solid state NMR spectrum further comprises a peak with chemical shift of about 58.0 ppm.

128. (New) The crystalline form of claim 127, wherein said  $^{13}\text{C}$  solid state NMR spectrum further comprises a peak with chemical shift of about 17.2 ppm.

129. (New) The crystalline form of claim 128, wherein said  $^{13}\text{C}$  solid state NMR spectrum further comprises a peak with chemical shift of about 10.1 ppm.

130 (New) The crystalline form of claim 129, wherein said  $^{13}\text{C}$  solid state NMR spectrum further comprises a peak with chemical shift of about 9.8 ppm.

131. (New) The crystalline form of claim 130, wherein said  $^{13}\text{C}$  solid state NMR spectrum further comprises a peak with chemical shift of about 9.3 ppm.

132. (New) The crystalline form of claim 131, wherein said  $^{13}\text{C}$  solid state NMR spectrum further comprises a peak with chemical shift of about 7.9 ppm.

133. (New) The crystalline form of claim 132, wherein said  $^{13}\text{C}$  solid state NMR spectrum further comprises a peak with chemical shift of about 6.6 ppm.

134. (New) The crystalline form of claim 124, wherein said substantially pure Form F has a purity of 82% or more by weight.

135. (New) The crystalline form of claim 124, wherein said substantially pure Form F has a purity of 84% or more by weight.

136. (New) The crystalline form of claim 124, wherein said substantially pure Form F has a purity of 86% or more by weight.

137. (New) The crystalline form of claim 124, wherein said substantially pure Form F has a purity of 88% or more by weight.

138. (New) The crystalline form of claim 124, wherein said substantially pure Form F has a purity of 90% or more by weight.

139. (New) The crystalline form of claim 124, wherein said substantially pure Form F has a purity of 92% or more by weight.

140. (New) The crystalline form of claim 124, wherein said substantially pure Form F has a purity of 94% or more by weight.

141. (New) The crystalline form of claim 124, wherein said substantially pure Form F has a purity of 96% or more by weight.

142. (New) The crystalline form of claim 124, wherein said substantially pure Form F has a purity of 98% or more by weight.

143. (New) The crystalline form of claim 124, wherein said substantially pure Form F has a purity of 99% or more by weight.

CLAIMS

What is claimed is:

1. A crystalline form of azithromycin selected from the group consisting of forms D, E, substantially pure F, substantially pure G, H, J, M substantially in the absence of azithromycin dihydrate, N, O, P, Q, and R.  
5
2. A crystalline form of azithromycin according to claim 1 wherein said form is form D and is further characterized as having a <sup>13</sup>C solid state NMR spectrum having a peaks with chemical shifts of about 178.1 ppm, 103.9 ppm, 95.1 ppm, 84.2 ppm, 10.6 ppm, 9.0 ppm and 8.6 ppm.
- 10 3. A crystalline form of azithromycin according to claim 1 wherein said form is form E.
4. A crystalline form of azithromycin according to claim 1 wherein said form is substantially pure form F and is further characterized as having a <sup>13</sup>C solid state NMR spectrum having a peaks with chemical shifts of about 179.5 ppm, 178.6 ppm, 58.0 ppm, 10.1 ppm 9.8 ppm, 9.3 ppm, 7.9 ppm and 6.6 ppm.
- 15 5. A crystalline form of azithromycin according to claim 4 wherein said azithromycin comprises 90% or more by weight of form F azithromycin.
6. A crystal form according to claim 1 wherein said form is substantially pure form G and is further characterized as having a <sup>13</sup>C solid state NMR spectrum having a peaks with chemical shifts of about 179.5 ppm, 10.4 ppm, 9.9 ppm, 9.3 ppm, 7.6 ppm and  
20 6.5 ppm.
7. A crystalline form of azithromycin according to claim 6 wherein said azithromycin comprises 90% or more by weight of form G azithromycin.
8. A crystal form according to claim 1 wherein said form is form H and is further characterized as having a <sup>13</sup>C solid state NMR spectrum having a peaks with  
25 chemical shifts of about 179.5 ppm, 178.7 ppm, 9.9 ppm, 9.1 ppm, 7.9 ppm and 7.0 ppm.
9. A crystal form according to claim 1 wherein said form is form J and is further characterized as having a <sup>13</sup>C solid state NMR spectrum having a peaks with  
30 chemical shifts of about 179.6 ppm, 178.4 ppm, 25.2 ppm, 11.5 ppm, 10.0 ppm, 9.3 ppm, 8.1 ppm and 6.8 ppm.

10. A crystal form according to claim 1 wherein said form is form M substantially in the absence of azithromycin dihydrate and is further characterized as having a <sup>13</sup>C solid state NMR spectrum having a peaks with chemical shifts of about 179.6 ppm, 41.9 ppm, 26.0 ppm, 16.3 ppm, 10.3 ppm, 9.6 ppm, 9.3 ppm, 7.7 ppm and 7.1 ppm.
- 5 11. A crystal form according to claim 1 wherein said form is form N and is further characterized as having a <sup>13</sup>C solid state NMR spectrum having a peaks with chemical shifts of about 179.6 ppm, 178.7 ppm, 105.6 ppm, 58.1 ppm, 26.0 ppm, 9.9 ppm, 9.4 ppm, 7.9 ppm, and 6.6 ppm.
12. A crystal form according to claim 1 wherein said form is form O.
- 10 13. A crystal form according to claim 1 wherein said form is form P.
14. A crystal form according to claim 1 wherein said form is form Q.
15. A crystal form according to claim 1 wherein said form is form R and is further characterized as having a <sup>13</sup>C solid state NMR spectrum having a peaks with chemical shifts of about 177.9 ppm, 103.6 ppm, 95.3 ppm, 10.3 ppm, 9.6 ppm, 8.9 ppm, and 8.6 ppm.
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